Remarks

Claims 1-36 of the application were rejected and remain for consideration by the Examiner.

Claim Rejections – 35 USC § 102 – Park et al.

The Examiner rejected claims 1-4 under 35 U.S.C. 102(e) as being anticipated with respect to Park et al., US Patent No. 6,389,322. Park et al. does not anticipate these claims because not all limitations of the claims are found in Park et al., either expressly or inherently (see MPEP 2131). Nor are the claims obvious with respect to Park et al.

1. Independent Claim 1

The Examiner reviewed the preamble in detail. The preamble recites "A method for providing a cutting file for a computer numerical control robotic tool to a customer . . ." As stated, the cutting file goes to the customer, and thereafter the manufacturing is done by the customer. Park et al., on the other hand, is directed to the remote manufacture of furniture covers. "Remote," in the sense it is used in Park et al., means that the manufacture of templates is done at a remote location from, and by a party other than, the owner of the piece of furniture. For example, upholsterers, interior decorators, and householders are invited to advise of the type over furniture to be covered, are asked if they want templates mailed to them or manufactured by an upholsterer, and receive prices for manufacturing and delivering the cover (see col. 3, lines 59-63 and col. 4, lines 17-22). The manufacturing of the templates is remote from the owner of the piece of furniture, who is the customer. Unlike Applicant's invention, the template manufacturing process of Park et al. is remote from the customer.

Contrary to the Examiner's assertion that the method of Park et al. produces a cutting file, Park et al. discloses only "templates." "Templates" are not cutting files. "Templates" as used in Park et al. is a vague term at best. For example, a plurality of templates may be adjoined or abutted to form a cover (see col. 3, lines 53-57) and may be sewn together (see col. 14, lines 29-30). Park et al. further states that templates have to be sewn together to make a cover, implying that the templates are fabric or other skin (see col. 7, lines 26-27). Templates are also shapes, however, that are used to cut out covers, and mailing of the templates to interested parties is disclosed (see col. 4, lines 17-20). Templates are plotted on paper, and may be "life-size," to be used as a guide for cutting pieces of fabric to be sewn together to form the cover (see col. 14, lines 12-18, col. 17, lines 58-61, and col. 18, lines 14-26). "Fabric is cut manually from the outline of life-size templates . . . ." (col. 18, lines 35-36). Templates may also be displayed on a screen (see col. 14, lines 19-23). Templates are only two-dimensional (see col. 15, lines 51-56). So, ultimately, it appears that "templates" refers to two-dimensional shapes that are either physical, such as paper, fabric, or other skin, or they may be representations of two-dimensional shapes appearing on a computer screen and geometrically defined by coordinates, lines, and curves (see, e.g., col. 2, lines 24-29 and col. 7, lines 45 to col. 8, line 31). "Templates" are not, in any case, cutting files, in that they provide no direction to an automated tool for forming the shape of individual pieces.

Park et al. discloses omitting printing of templates and providing computer output directly to an automated cutting machine to cut cover material directly (see col. 2, line 66 to col. 3, line 2 and col. 18, lines 51-54). Nowhere in Park et al. is it suggested that

the customer receive any such output for instructing an automatic cutting machine; rather, an automated cutting machine would only be present at the site remote from the customer. For example, the automated cutting machine would be in a template manufacturer's shop. As discussed above, the manufacturing of Park et al. is performed at a location remote from the owner of furniture. Although the owner of furniture may provide design parameters describing the furniture, any directions for an automated cutting machine are produced by the manufacturer of the template and remain with the manufacturer. Therefore, no cutting file is provided to an owner of the furniture, a customer.

Addressing specific limitations of claim 1, among other things Park et al. does not include claim 1's last two limitations (with identifying letters as added by the Examiner): (e) generating at the remote site using the generic model for a particular product a cutting file that incorporates the final design parameters; and (f) making the cutting file available to the customer. As discussed above with respect to the preamble, Park et al. does not disclose a cutting file, as its "templates" are not cutting files. Nor are cutting files made available to the customer, as any directions to an automated cutting machine of Park et al. never go to the customer nor may they be accessed by the customer, but instead stay with the manufacturer who has the machine. Templates, not cutting files, are available to a customer. As indicated by the Park et al. title and disclosure, the "remote" manufacture of furniture covers means manufacture of covers at a location remote from the customer, and therefore there is no reason for a cutting file to ever be made available to a customer. Park et al. does not anticipate claim 1.

Claim 1 is also nonobvious over Park et al. in that there is no *prima facie* case of obviousness. Park et al., in combination with the knowledge of one of ordinary skill in

the art, fails to provide suggestion or motivation to modify its disclosure to teach the limitations of Applicant's claim 1. The proposed modification to Park et al. changes the principle of operation, which is to manufacture furniture templates/covers (and not cutting files) at a location remote from an owner of furniture. The manufacturing of Applicant's invention occurs with the customer; it is the generation of a cutting file that occurs at a site remote from the customer. Further, Park et al. is directed only to cover and skin related applications and processes, based on two-dimensional templates (see col. 5, lines 60-62). Applicant's invention, on the other hand, results in three-dimensional components that may be assembled to make products. Applicant's invention may be applied to create objects themselves. Finally, as discussed above, Park et al. fails to teach or suggest all claim limitations. Claim 1 is nonobvious over Park et al.

2. Dependent claims 2-4

Because claims 2-4 depend either directly from allowable claim 1 or from other intervening allowable claims and respectively add limitations thereto, these claims are allowable. For additional reasons set forth below, claims 2-4 are allowable.

2.a. Claim 2

The Examiner noted that in Park et al. "the template is displayed on the screen . . ." The Applicant agrees with this statement (see col. 14, lines 19-26). Applicant's claim 2, however, does not refer to generating templates, which appear to be individual pieces (see Park et al. Figures 13(A) and 13(B)), but to "generating a final representational image of the *product* . . ." and displaying that final representational image to the customer (emphasis added). Park et al. does not disclose displaying a final representational image of the product (covered furniture) with the dimensions altered to show the

incorporated design parameters. Therefore Park et al. is lacking the limitations of claim 2, and cannot anticipate claim 2.

Claim 2 is also nonobvious over Park et al. in that there is no *prima facie* case of obviousness. Park et al., in combination with the knowledge of one of ordinary skill in the art, fails to provide suggestion or motivation to modify its disclosure to teach the limitations of Applicant's claim 2. Park et al. is directed only to displaying generated two-dimensional templates (see, e.g., Park et al. Figures 13(A) and 13(B)). Applicant's invention as recited on claim 2, on the other hand, generates final representational images of complete products, modified to incorporate final design parameters (see Applicant's Figure 2). Finally, as discussed above, Park et al. fails to teach or suggest all claim limitations. Claim 2 is nonobvious over Park et al.

2.b. Claim 3

Claim 3 includes, as identified by letter in the Examiner's Office Action, "(c) allowing the customer to specify tool-related data." There is no mention of tool-related data or its equivalent in Park et al. Applicant's tool-related data is disclosed in the specification as including features such as vacuum hose size and type 122 on the CNC tool and bit size 124 (see Applicant's ¶ 0021 and Figure 3). While Park et al. discloses a "configurable" automated cutting machine and one that receives the output of a computer program, Park et al. does not disclose specifying any particular features of an automated cutting machine. Applicant's invention provides that the customer may specify tool-related data, serving to communicate a configuration of the CNC robotic tool to the cutting file; nowhere in Park et al. is any "configuration" disclosed to be done by a customer or communicated to a cutting file by a customer. As previously dis-

cussed in ¶ 1 herein, the automated cutting machine in Park et al. resides with the manufacturer, not the customer.

The Examiner also noted that in Park et al. a stitching instruction is chosen by the customer. This is not tool-related data. Instead, it is instructions how to sew templates together. The instructions are developed by the Park et al. invention based on the templates. The instructions, which might be expected to be printed on sheets of paper or directly on templates, are generated by a computer program based on template dimensions and other template-descriptive data that are input by a customer (see col. 14, lines 27-56). The instructions are not based on tool-related data input by a customer as in Applicant's invention. Stitching instructions are not tool-related data.

Claim 3 is also nonobvious over Park et al. in that there is no *prima facie* case of obviousness. Park et al., in combination with the knowledge of one of ordinary skill in the art, fails to provide suggestion or motivation to modify its disclosure to achieve the results of Applicant's claim 3. Park et al. indicates no communication by a customer to a cutting file that sets up the cutting file for a particular automated cutting machine configuration, and such communication would change the principle of operation of Park et al. Applicant's invention, on the other hand, does allow specification of tool-related data to a cutting file that sets up the cutting file for a particular CNC robotic tool configuration. Finally, as discussed above, Park et al. fails to teach or suggest all claim limitations. Claim 3 is nonobvious over Park et al.

2.c. Claim 4

For reasons previously discussed, Park et al. does not anticipate or render obvious claim 4. The templates of Park et al. are not cutting files as in Applicant's claims

(see ¶ 1 above), stitching instructions are not tool-related data (see ¶ 2.b above), and cutting files are never transmitted to a customer (see ¶ 1, explaining that cutting files are never made available to a customer).

Claim Rejections – 35 USC § 103 – Park et al. in view of Fischer

The Examiner rejected claims 5-36 under 35 U.S.C. 103(a) as unpatentable over Park et al. in view of Fischer, US Patent No. 6,675,055. These claims are nonobvious in that there is no *prima facie* case of obviousness.

3. Dependent claims 5-8

Because claims 5-8 depend either directly from allowable claim 1 or from other intervening allowable claims, and respectively add limitations thereto, these claims are allowable. For additional reasons set forth below, claims 5 and 6 are allowable.

3.a. Claim 5

As discussed above in ¶ 1, Park et al. does not include cutting files or their equivalent. Nor does Fischer disclose cutting files. Therefore, the combination of references does not teach or suggest all claim limitations. Fischer instead discloses generation of molding configuration subsystems, which are based on the selection of certain elements selected by a customer (see col. 2, lines 36-41). These subsystems comprise molding equipment, not directions for operation of tools, and Fischer's process is directed to selection of components that may be specified by a customer and purchased if desired (see col. 6, lines 1-37). Applicant's customer does not purchase components, but instead purchases a cutting file.

The Examiner cites generation of machine tool parameters as part of the method of Fischer. This information is related to the equipment selection of the customer from

a fixed electronic catalog and communicates the specification of equipment to be provided by the manufacturer, unlike Applicant's specifications that are input to a cutting file that directs a robotic tool. Applicant's tool-related data describes tools used to manufacture a product, not equipment to be purchased (see col. 6, lines 36-37). The term "machine tool codes" is not defined in Fischer, but appears to refer to codes corresponding to particular pieces of equipment, not directions for operating equipment (see col. 2, lines 50-51).

There is also no reasonable expectation of success in combining Park et al. and Fischer. Both references relate to manufacture of a product at a location remote from a customer. Applicant's invention relates to generation of a cutting file at a location remote from a customer for use by the customer in manufacturing a product at the customer's location. There being no *prima facie* case of obviousness, claim 5 is nonobvious with respect to the cited references.

3.b. Claim 6

For the same reasons that claims 1 and 5 are allowable, claim 6 is allowable.

4. Independent claims 9 and 10

For the same reasons that claims 1-8 are allowable, claims 9 and 10 are allowable. As previously stated, neither Park et al. nor Fischer discloses a cutting file or its equivalent.

5. Dependent claims 11-17

Because claims 11-17 depend either directly from allowable claim 10 or from other intervening allowable claims, and respectively add limitations thereto, these

claims are allowable. For additional reasons set forth below, claims 11-17 are allowable.

5.a. Claim 11

For the same reasons that claim 2 is allowable, claim 11 is allowable.

5.b. Claim 12

For the same reasons that claim 3 is allowable, claim 12 is allowable. Also, contrary to the Examiner's assertion, as discussed above in ¶ 3.a, there is no tool-related data in Fischer as disclosed and claimed by Applicant. The tool parameters of Fischer are related to the product (the configuration system) being made, not to the tools for making the product.

5.c. Claims 13-15

For the same reasons that claims 4-6 are allowable, claims 13-15 are allowable.

5.d. Claims 16-17

For the same reasons that claims 7 and 8 are allowable, claims 16 and 17 are allowable.

6. Independent claim 18

For the same reasons that claims 1-10 are allowable, claim 18 is allowable.

7. Dependent claims 19-27

Because claims 19-27 depend either directly from allowable claim 18 or from other intervening allowable claims, and respectively add limitations thereto, these claims are allowable. For additional reasons set forth below, claims 19-27 are allowable.

7.a. Claim 19

For the same reasons that claims 2 and 11 are allowable, claim 19 is allowable.

7.b. Claim 20

For the same reasons that claims 3 and 12 are allowable, claim 20 is allowable.

7.c. Claims 21-23

For the same reasons that claims 13-15 are allowable, claims 21-23 are allowable.

7.d. Claims 24-25

For the same reasons that claims 16-17 are allowable, claim 18 is allowable.

7.e. Claim 26

For the same reasons that claims 1 and 12 are allowable, claim 26 is allowable. Also, as the Examiner states, Fischer discloses a limitation of catalogs that list available items. Unlike Applicant's invention, however, a customer in Fischer's process cannot change the specification of any given component selected from the catalog; no part can be altered. Labeling Applicant's models as "generic" implies that they can be customized; Fischer's individual parts cannot be changed.

7.f. Claim 27

For the same reasons that claims 4 and 5 are allowable, claim 27 is allowable.

8. Independent claim 28

For the same reasons that claims 18 and 26 are allowable, claim 28 is allowable.

9. Independent claim 29

For the same reasons that claim 28 is allowable, claim 29 is allowable.

10. Dependent claims 30-36

Because claims 30-36 depend either directly from allowable claim 29 or from other intervening allowable claims, and respectively add limitations thereto, these claims are allowable. For additional reasons set forth below, claims 30-36 are allowable.

10.a. Claim 30

For the same reasons that claim 19 is allowable, claim 30 is allowable.

10.b. Claim 31

For the same reasons that claim 20 is allowable, claim 31 is allowable.

10.c. Claims 32-34

For the same reasons that claims 21-23 are allowable, claims 32-34 are allowable.

10.d. Claims 35 and 36

For the same reasons that claims 24 and 25 are allowable, claims 35 and 36 are allowable.

If the Examiner has any questions about the present Reply, a telephone interview is respectfully requested.

As the rejections entered by the Examiner in the Official Action dated February 17, 2004 have been shown to be inapplicable, reconsideration and allowance of claims 1-36, and passage of these claims to issue, is hereby respectfully requested.

Respectfully submitted,

Date: May 14, 2004

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